Abstract

A method for storing at least one set of data segments in a data storage system including data storage media having at least one rotatable recording surface, where the data segments are stored in concentric data tracks, each recorded data segment including a start, an end and a rotational phase from that data segment to each of the respective ones of all other data segments in the set, wherein the data segments are recorded with coherent relative rotational phases. For each data segment in the set the relative rotational phases of that data segment to respective ones of all other data segments in the set are predetermined. Further, the rotational phases from a data segment to respective ones of all other data segments in the set comprise the rotational phases from the end of that data segment to the start of the respective ones of all other data segments in the set, and have one of a limited number of predetermined values. The data segments are recorded so as to obtain a nearly constant data storage transfer rate when reading the data from the data storage media. The data segments read from the storage media can be combined to reformulate one or more data streams from the data segments. The data storage system can be a component of a computer system. The data storage system can be also be a component of an audio video storage server. In that case, the data segments comprise audio visual data and the method of the present invention is used to store and retrieve isochronous Audio-Video (AV) content for consumer electronics applications.